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| 09/887,747      | 06/21/2001  | Mihaela Van Der Schaar | US 000168           | 7494             |

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EXAMINER

LEE, RICHARD J

ART UNIT

PAPER NUMBER

2613

DATE MAILED: 02/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/887,747

Applicant(s)

VAN DER SCHAAR ET AL.

Examiner

Richard Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4</u> . | 6) <input type="checkbox"/> Other: ____  |

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1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because phrases which can be implied, such as "the invention" appearing at line 6, lines 7-8, line 9, respectively, of the Abstract should be avoided. Correction is required. See MPEP § 608.01(b).

3. The drawings are objected to because:

(a) elements 455, 460b, 460c as shown in Figure 4 of the drawings have not been identified in the Specification; and

(b) elements 625b, 625c, 120'b, 120''b as shown in Figure 6c of the drawings have not been identified in the Specification. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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5. Claims 1-45 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention. In the present case, description of various elements within Figure 1 has been omitted in the Specification. The applicants' reason for this is due to the fact that motion compensation is well known in the art and need not be discussed, as specified at page 4 of the specification. It is however imperative and a requirement for the applicant to provide an adequate written description for the features as shown for completeness and even though Figure 1 is presented as prior art. Further, description of various elements within Figure 3a has been omitted in the Specification. Figure 3a combines most of the features of Figure 1, and as such it is again a requirement that the specification provide a written description for all the elements within Figure 3a so as to enable one skilled in the art.

6. Claims 1-14 and 29-45 are objected to because of the following informalities:

- (1) claim 1, line 2, after "plurality of frames", ",", should be inserted for clarity;
- (2) claim 29, line 1, "A" should be changed to "An" for clarity;
- (3) claim 29, line 2, after "plurality of frames", ",", should be inserted for clarity;

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(4) claim 41, line 2, after “plurality of frames”, “,” should be inserted for clarity; and

(5) claim 45, line 2, after “plurality of frames”, “,” should be inserted for clarity.

Appropriate correction is required.

7. Claims 1-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For examples:

(1) claim 1, line 8, “said subsequent transmission frames” shows no clear antecedent basis;

(2) claim 1, line 2, “the selective elements” shows no clear antecedent basis;

(3) claim 1, line 10, after “first”, “set of” should be properly inserted in order to provide proper antecedent basis for the same as specified at line 7;

(4) claim 2, line 1, , after “first”, “set of” should be properly inserted in order to provide proper antecedent basis for the same as specified at claim 1, line 7;

(5) claim 4, line 1, after “enhancement”, “factor” should be properly inserted in order to provide proper antecedent basis for the same as specified at claim 2, lines 1-2;

(6) claim 4, line 2, “said at least one selectively enhanced elements” shows no clear antecedent basis;

(7) claim 5, line 1, after “factor”, “value” should be properly inserted in order to provide proper antecedent basis for the same as specified at claim 2, lines 1-2;

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(8) claim 6, lines 1-2, the phrase “wherein said at least one element is a plurality of elements” as claimed is vague and indefinite in that it is unclear how one element can include a plurality of elements as claimed;

(9) claim 7, line 1, , after “first”, “set of” should be properly inserted in order to provide proper antecedent basis for the same as specified at claim 1, line 7;

(10) claim 7, line 2, “said at least one elements” shows no clear antecedent basis;

(11) claim 8, line 1, “said at least one element position value” shows no clear antecedent basis;

(12) claim 10, line 1, “said known values” shows no clear antecedent basis;

(13) claim 15, line 6, “said enhancement layer frames” shows no clear antecedent basis;

(14) claim 15, lines 9-10, “said subsequent transmission frames” shows no clear antecedent basis;

(15) claim 15, line 10, “said selective elements” shows no clear antecedent basis;

(16) claim 15, lines 11-12, after “first”, “set of” should be properly inserted in order to provide proper antecedent basis for the same as specified at line 7;

(17) claim 16, line 1, after “first”, “set of enhancement” should be properly inserted in order to provide proper antecedent basis for the same as specified at claim 15, line 7;

(18) claim 18, line 1, “said on shift enhancement value” shows no clear antecedent basis;

(19) claim 18, line 2, “said at least one selectively enhanced elements” shows no clear antecedent basis;

(20) claim 19, line 1, after “factor”, “value” should be properly inserted in order to provide proper antecedent basis for the same as specified at claim 16, lines 1-2;

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(21) claim 20, the phrase “wherein said at least one element is a plurality of elements” as claimed is vague and indefinite in that it is unclear how one element can include a plurality of elements as claimed;

(22) claim 21, line 1, after “first”, “set of enhancement” should be properly inserted in order to provide proper antecedent basis for the same as specified at claim 15, line 7;

(23) claim 22, line 1, “said at least one element position value” shows no clear antecedent basis;

(24) claim 23, line 1, after “first”, “set of enhancement” should be properly inserted in order to provide proper antecedent basis for the same as specified at claim 15, line 7;

(25) claim 24, line 1, “said known values” shows no clear antecedent basis;

(26) claim 29, lines 8-9, “said subsequent transmission frames” shows no clear antecedent basis;

(27) claim 29, line 9, “said selective elements” shows no clear antecedent basis;

(28) claim 29, lines 10-11, “said first enhancement criteria” shows no clear antecedent basis;

(29) claim 30, line 1, after “first”, “set of” should be properly inserted in order to provide proper antecedent basis for the same as specified at claim 29, line 7;

(30) claim 32, lines 1-2, “said at least on shift enhancement value” shows no clear antecedent basis;

(31) claim 32, line 2, “said at least one selectively enhancement elements” shows no clear antecedent basis;

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(32) claim 33, line 1, after “factor”, “value” should be properly inserted in order to provide proper antecedent basis for the same as specified at claim 30, line 2;

(33) claim 35, line 1, after “first”, “set of” should be properly inserted in order to provide proper antecedent basis for the same as specified at claim 29, line 7;

(34) claim 35, line 2, “said at least one elements” shows no clear antecedent basis;

(35) claim 36, lines 1-2, “said at least one element position value” shows no clear antecedent basis;

(36) claim 37, line 1, after “first”, “set of” should be properly inserted in order to provide proper antecedent basis for the same as specified at claim 29, line 7;

(37) claim 38, line 1, “said known values” shows no clear antecedent basis;

(38) claim 41, lines 9-10, “said subsequent transmission frames” shows no clear antecedent basis;

(39) claim 41, line 10, “said selective elements” shows no clear antecedent basis;

(40) claim 41, line 12, “said first enhancement criteria” shows no clear antecedent basis;

(41) claim 42, line 1, , after “first”, “set of” should be properly inserted in order to provide proper antecedent basis for the same as specified at claim 41, line 7;

(42) claim 44, lines 1-2, “said at least one shift enhancement value” shows no clear antecedent basis;

(43) claim 44, line 2, “said at least one selectively enhanced elements” shows no clear antecedent basis;

(44) claim 45, line 5, “said method” shows no clear antecedent basis;

(45) claim 45, lines 8-9, “said subsequent frames” shows no clear antecedent basis;



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(46) claim 45, line 9, "said selective elements" shows no clear antecedent basis; and

(47) claim 45, line 10, after "first", "set of" should be properly inserted in order to provide proper antecedent basis for the same as specified at line 7.

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al (6,263,022).

Due to the indefiniteness of the claims as pointed out in the above paragraph (7), the Examiner wants to point out that the claims are being read in the broadest sense.

Chen et al discloses a system and method for fine granular scalable video with selective quality enhancement as shown in Figures 2 and 3, and the same method, system, and apparatus for improving the transmission efficiency of an original video signal transmitted as a plurality of frames, the frames containing the video signal encoded in a base layer and an enhancement layer wherein at least one element of the enhancement layer is selectively enhanced by designating the at least one selected element to have a higher priority of transmission (see column 5, line 54 to column 6, line 25, column 6, line 53 to column 7, line 6) as claimed in claims 1-45, comprising the same means for transmitting a first set of criteria in a first frame having a base layer and an enhancement layer (see Figure 2 and column 5, line 54 to column 6, line 25); means for transmitting an indicator (i.e., shifting factor and mode indicator, see column 4, lines 10-22,

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column 6, line 41 to column 7, line 35, column 13, lines 46-66) in each of the subsequent transmission frames when the selective elements contained within subsequent transmission frames have substantially the same set of enhancement criteria as the first enhancement criteria (see column 5, line 54 to column 6, line 25); wherein the first criteria includes at least one enhancement factor value, wherein the at least one enhancement value corresponds to each of the at least one selectively enhanced elements, the enhancement factor is power of two, wherein the at least one element is a plurality of elements (see column 6, line 53 to column 7, line 24); the first criteria includes position, size and enhancement factor value for each of the at least one elements, wherein the at least one element position value is selected with respect to a known point (i.e., the position and size of blocks/macroblocks, and shifting factor (enhancement factor value) indicating higher priority thereby enhancing the image (see column 6, line 53 to column 7, line 6, column 8, lines 6-25)); wherein the first criteria includes at least one second indicator (i.e., flag at the beginning of each block, see column 7, lines 13-18) that indicates a corresponding known value, the known values are selected from the group of position, displacement vector, size, enhancement factor, wherein the indicator is substantially the same as the second indicator; wherein the element comprises a plurality of pixels in an array having an equal number of rows and columns, wherein the number of rows is selected from the group of 2, 3, 4, 8, 16 (see column 6, line 53 to column 7, line 6, column 8, lines 6-25); wherein the enhancement layer is fine granular scalability encoded (see column 2, lines 43-60, column 8, lines 32-40); means for receiving each of the transmitted frames and means for applying the first set of enhancement criteria to elements of a received enhancement layer when the indicator is detected in the frame (see column 14, lines 1-24).

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10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Divakaran et al, Chen et al (6,057,884), Hsieh et al, Chen (6,072,831 and 5,886,736) disclose various types of video encoders.

a. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

or faxed to:


(703) 872-9314, (for formal communications intended for entry)

(for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Lee whose telephone number is (703) 308-6612. The Examiner can normally be reached on Monday to Friday from 8:00 a.m. to 5:30 p.m, with alternate Fridays off.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group customer service whose telephone number is (703) 306-0377.

  
RICHARD LEE  
PRIMARY EXAMINER

Richard Lee/rl

2/6/04

